SEQUENCE LISTING

<110> Commonwealth Scientific and Industrial Research Organisation
Walter and Eliza Hall Institute of Medical Research
Ludwig Institute for Cancer Research

<120> Crystal structure of ErbB2 and uses thereof

<130> 501742/JEP

<150> Australian Patent Provisional Application No 2002951853
<151> 2002-10-04

<160> 4

<170> PatentIn version 3.1

<210> 1
<211> 509
<212> PRT
<213> Homo sapiens

<400> 1

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Ser Thr Gln Val Cys Thr Gly Thr Asp Met Lys Leu Arg Leu Pro Ala
1               5                  10                  15

Ser Pro Glu Thr His Leu Asp Met Leu Arg His Leu Tyr Gln Gly Cys
            20                  25                  30

Gln Val Val Gln Gly Asn Leu Glu Leu Thr Tyr Leu Pro Thr Asn Ala
        35                  40                  45

Ser Leu Ser Phe Leu Gln Asp Ile Gln Glu Val Gln Gly Tyr Val Leu
    50                  55                  60

Ile Ala His Asn Gln Val Arg Gln Val Pro Leu Gln Arg Leu Arg Ile
65                  70                  75                  80

Val Arg Gly Thr Gln Leu Phe Glu Asp Asn Tyr Ala Leu Ala Val Leu
                85                  90                  95

Asp Asn Gly Asp Pro Leu Asn Asn Thr Thr Pro Val Thr Gly Ala Ser
            100                 105                 110

Pro Gly Gly Leu Arg Glu Leu Gln Leu Arg Ser Leu Thr Glu Ile Leu
        115                 120                 125
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Lys Gly Gly Val Leu Ile Gln Arg Asn Pro Gln Leu Cys Tyr Gln Asp
    130                 135                 140

Thr Ile Leu Trp Lys Asp Ile Phe His Lys Asn Asn Gln Leu Ala Leu
145                 150                 155                 160

Thr Leu Ile Asp Thr Asn Arg Ser Arg Ala Cys His Pro Cys Ser Pro
                165                 170                 175

Met Cys Lys Gly Ser Arg Cys Trp Gly Glu Ser Ser Glu Asp Cys Gln
            180                 185                 190

Ser Leu Thr Arg Thr Val Cys Ala Gly Gly Cys Ala Arg Cys Lys Gly
        195                 200                 205

Pro Leu Pro Thr Asp Cys Cys His Glu Gln Cys Ala Ala Gly Cys Thr
    210                 215                 220

Gly Pro Lys His Ser Asp Cys Leu Ala Cys Leu His Phe Asn His Ser
225                 230                 235                 240

Gly Ile Cys Glu Leu His Cys Pro Ala Leu Val Thr Tyr Asn Thr Asp
                245                 250                 255

Thr Phe Glu Ser Met Pro Asn Pro Glu Gly Arg Tyr Thr Phe Gly Ala
            260                 265                 270

Ser Cys Val Thr Ala Cys Pro Tyr Asn Tyr Leu Ser Thr Asp Val Gly
        275                 280                 285

Ser Cys Thr Leu Val Cys Pro Leu His Asn Gln Glu Val Thr Ala Glu
    290                 295                 300

Asp Gly Thr Gln Arg Cys Glu Lys Cys Ser Lys Pro Cys Ala Arg Val
305                 310                 315                 320

Cys Tyr Gly Leu Gly Met Glu His Leu Arg Glu Val Arg Ala Val Thr
                325                 330                 335

Ser Ala Asn Ile Gln Glu Phe Ala Gly Cys Lys Lys Ile Phe Gly Ser
            340                 345                 350

Leu Ala Phe Leu Pro Glu Ser Phe Asp Gly Asp Pro Ala Ser Asn Thr
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355 360 365

Ala Pro Leu Gln Pro Glu Gln Leu Gln Val Phe Glu Thr Leu Glu Glu
370 375 380

Ile Thr Gly Tyr Leu Tyr Ile Ser Ala Trp Pro Asp Ser Leu Pro Asp
385 390 395 400

Leu Ser Val Phe Gln Asn Leu Gln Val Ile Arg Gly Arg Ile Leu His
405 410 415

Asn Gly Ala Tyr Ser Leu Thr Leu Gln Gly Leu Gly Ile Ser Trp Leu
420 425 430

Gly Leu Arg Ser Leu Arg Glu Leu Gly Ser Gly Leu Ala Leu Ile His
435 440 445

His Asn Thr His Leu Cys Phe Val His Thr Val Pro Trp Asp Gln Leu
450 455 460

Phe Arg Asn Pro His Gln Ala Leu Leu His Thr Ala Asn Arg Pro Glu
465 470 475 480

Asp Glu Cys Val Gly Glu Gly Leu Ala Cys His Gln Leu Cys Ala Arg
485 490 495

Gly His Cys Trp Gly Pro Gly Pro Thr Gln Cys Val Asn
500 505

<210> 2
<211> 501
<212> PRT
<213> Homo sapiens

<400> 2

Leu Glu Glu Lys Lys Val Cys Gln Gly Thr Ser Asn Lys Leu Thr Gln
1 5 10 15

Leu Gly Thr Phe Glu Asp His Phe Leu Ser Leu Gln Arg Met Phe Asn
20 25 30

Asn Cys Glu Val Val Leu Gly Asn Leu Glu Ile Thr Tyr Val Gln Arg
35 40 45

```
Asn Tyr Asp Leu Ser Phe Leu Lys Thr Ile Gln Glu Val Ala Gly Tyr
    50                  55                  60

Val Leu Ile Ala Leu Asn Thr Val Glu Arg Ile Pro Leu Glu Asn Leu
65                  70                  75                  80

Gln Ile Ile Arg Gly Asn Met Tyr Tyr Glu Asn Ser Tyr Ala Leu Ala
                85                  90                  95

Val Leu Ser Asn Tyr Asp Ala Asn Lys Thr Gly Leu Lys Glu Leu Pro
            100                 105                 110

Met Arg Asn Leu Gln Glu Ile Leu His Gly Ala Val Arg Phe Ser Asn
        115                 120                 125

Asn Pro Ala Leu Cys Asn Val Glu Ser Ile Gln Trp Arg Asp Ile Val
    130                 135                 140

Ser Ser Asp Phe Leu Ser Asn Met Ser Met Asp Phe Gln Asn His Leu
145                 150                 155                 160

Gly Ser Cys Gln Lys Cys Asp Pro Ser Cys Pro Asn Gly Ser Cys Trp
                165                 170                 175

Gly Ala Gly Glu Glu Asn Cys Gln Lys Leu Thr Lys Ile Ile Cys Ala
            180                 185                 190

Gln Gln Cys Ser Gly Arg Cys Arg Gly Lys Ser Pro Ser Asp Cys Cys
        195                 200                 205

His Asn Gln Cys Ala Ala Gly Cys Thr Gly Pro Arg Glu Ser Asp Cys
    210                 215                 220

Leu Val Cys Arg Lys Phe Arg Asp Glu Ala Thr Cys Lys Asp Thr Cys
225                 230                 235                 240

Pro Pro Leu Met Leu Tyr Asn Pro Thr Thr Tyr Gln Met Asp Val Asn
                245                 250                 255

Pro Glu Gly Lys Tyr Ser Phe Gly Ala Thr Cys Val Lys Lys Cys Pro
            260                 265                 270
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Arg Asn Tyr Val Val Thr Asp His Gly Ser Cys Val Arg Ala Cys Gly
        275                 280                 285

Ala Asp Ser Tyr Glu Met Glu Glu Asp Gly Val Arg Lys Cys Lys Lys
    290                 295                 300

Cys Glu Gly Pro Cys Arg Lys Val Cys Asn Gly Ile Gly Ile Gly Glu
305                 310                 315                 320

Phe Lys Asp Ser Leu Ser Ile Asn Ala Thr Asn Ile Lys His Phe Lys
                325                 330                 335

Asn Cys Thr Ser Ile Ser Gly Asp Leu His Ile Leu Pro Val Ala Phe
            340                 345                 350

Arg Gly Asp Ser Phe Thr His Thr Pro Pro Leu Asp Pro Gln Glu Leu
        355                 360                 365

Asp Ile Leu Lys Thr Val Lys Glu Ile Thr Gly Phe Leu Leu Ile Gln
    370                 375                 380

Ala Trp Pro Glu Asn Arg Thr Asp Leu His Ala Phe Glu Asn Leu Glu
385                 390                 395                 400

Ile Ile Arg Gly Arg Thr Lys Gln His Gly Gln Phe Ser Leu Ala Val
                405                 410                 415

Val Ser Leu Asn Ile Thr Ser Leu Gly Leu Arg Ser Leu Lys Glu Ile
            420                 425                 430

Ser Asp Gly Asp Val Ile Ile Ser Gly Asn Lys Asn Leu Cys Tyr Ala
        435                 440                 445

Asn Thr Ile Asn Trp Lys Lys Leu Phe Gly Thr Ser Gly Gln Lys Thr
    450                 455                 460

Lys Ile Ile Ser Asn Arg Gly Glu Asn Ser Cys Lys Ala Thr Gly Gln
465                 470                 475                 480

Val Cys His Ala Leu Cys Ser Pro Glu Gly Cys Trp Gly Pro Glu Pro
                485                 490                 495
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Arg Asp Cys Val Ser
500

<210> 3
<211> 500
<212> PRT
<213> Homo sapiens

<400> 3

Ser Glu Val Gly Asn Ser Gln Ala Val Cys Pro Gly Thr Leu Asn Gly
1 5 10 15

Leu Ser Val Thr Gly Asp Ala Glu Asn Gln Tyr Gln Thr Leu Tyr Lys
20 25 30

Leu Tyr Glu Arg Cys Glu Val Val Met Gly Asn Leu Glu Ile Val Leu
35 40 45

Thr Gly His Asn Ala Asp Leu Ser Phe Leu Gln Trp Ile Arg Glu Val
50 55 60

Thr Gly Tyr Val Leu Val Ala Met Asn Glu Phe Ser Thr Leu Pro Leu
65 70 75 80

Pro Asn Leu Arg Val Val Arg Gly Thr Gln Val Tyr Asp Gly Lys Phe
85 90 95

Ala Ile Phe Val Met Leu Asn Tyr Asn Thr Asn Ser Ser His Ala Leu
100 105 110

Arg Gln Leu Arg Leu Thr Gln Leu Thr Glu Ile Leu Ser Gly Gly Val
115 120 125

Tyr Ile Glu Lys Asn Asp Lys Leu Cys His Met Asp Thr Ile Asp Trp
130 135 140

Arg Asp Ile Val Arg Asp Arg Asp Ala Glu Ile Val Val Lys Asp Asn
145 150 155 160

Gly Arg Ser Cys Pro Pro Cys His Glu Val Cys Lys Gly Arg Cys Trp
165 170 175

Gly Pro Gly Ser Glu Asp Cys Gln Thr Leu Thr Lys Thr Ile Cys Ala
180 185 190

```
Pro Gln Cys Asn Gly His Cys Phe Gly Pro Asn Pro Asn Gln Cys Cys
        195                 200                 205

His Asp Glu Cys Ala Gly Gly Cys Ser Gly Pro Gln Asp Thr Asp Cys
    210                 215                 220

Phe Ala Cys Arg His Phe Asn Asp Ser Gly Ala Cys Val Pro Arg Cys
225                 230                 235                 240

Pro Gln Pro Leu Val Tyr Asn Lys Leu Thr Phe Gln Leu Glu Pro Asn
                245                 250                 255

Pro His Thr Lys Tyr Gln Tyr Gly Gly Val Cys Val Ala Ser Cys Pro
            260                 265                 270

His Asn Phe Val Val Asp Gln Thr Ser Cys Val Arg Ala Cys Pro Pro
        275                 280                 285

Asp Lys Met Glu Val Asp Lys Asn Gly Leu Lys Met Cys Glu Pro Cys
    290                 295                 300

Gly Gly Leu Cys Pro Lys Ala Cys Glu Gly Thr Gly Ser Gly Ser Arg
305                 310                 315                 320

Phe Gln Thr Val Asp Ser Ser Asn Ile Asp Gly Phe Val Asn Cys Thr
                325                 330                 335

Lys Ile Leu Gly Asn Leu Asp Phe Leu Ile Thr Gly Leu Asn Gly Asp
            340                 345                 350

Pro Trp His Lys Ile Pro Ala Leu Asp Pro Glu Lys Leu Asn Val Phe
        355                 360                 365

Arg Thr Val Arg Glu Ile Thr Gly Tyr Leu Asn Ile Gln Ser Trp Pro
    370                 375                 380

Pro His Met His Asn Phe Ser Val Phe Ser Asn Leu Thr Thr Ile Gly
385                 390                 395                 400

Gly Arg Ser Leu Tyr Asn Arg Gly Phe Ser Leu Leu Ile Met Lys Asn
                405                 410                 415
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Leu Asn Val Thr Ser Leu Gly Phe Arg Ser Leu Lys Glu Ile Ser Ala
            420                 425                 430

Gly Arg Ile Tyr Ile Ser Ala Asn Arg Gln Leu Cys Tyr His His Ser
        435                 440                 445

Leu Asn Trp Thr Lys Val Leu Arg Gly Pro Thr Glu Glu Arg Leu Asp
    450                 455                 460

Ile Lys His Asn Arg Pro Arg Arg Asp Cys Val Ala Glu Gly Lys Val
465                 470                 475                 480

Cys Asp Pro Leu Cys Ser Ser Gly Gly Cys Trp Gly Pro Gly Pro Gly
                485                 490                 495

Gln Cys Leu Ser
            500
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<210> 4
<211> 502
<212> PRT
<213> Homo sapiens

<400> 4

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Gln Pro Ser Asp Ser Gln Ser Val Cys Ala Gly Thr Glu Asn Lys Leu
1               5                   10                  15

Ser Ser Leu Ser Asp Leu Glu Gln Gln Tyr Arg Ala Leu Arg Lys Tyr
            20                  25                  30

Tyr Glu Asn Cys Glu Val Val Met Gly Asn Leu Glu Ile Thr Ser Ile
        35                  40                  45

Glu His Asn Arg Asp Leu Ser Phe Leu Arg Ser Val Arg Glu Val Thr
    50                  55                  60

Gly Tyr Val Leu Val Ala Leu Asn Gln Phe Arg Tyr Leu Pro Leu Glu
65                  70                  75                  80

Asn Leu Arg Ile Ile Arg Gly Thr Lys Leu Tyr Glu Asp Arg Tyr Ala
                85                  90                  95

Leu Ala Ile Phe Leu Asn Tyr Arg Lys Asp Gly Asn Phe Gly Leu Gln
```

100 105 110

Glu Leu Gly Leu Lys Asn Leu Thr Glu Ile Leu Asn Gly Gly Val Tyr
115 120 125

Val Asp Gln Asn Lys Phe Leu Cys Tyr Ala Asp Thr Ile His Trp Gln
130 135 140

Asp Ile Val Arg Asn Pro Trp Pro Ser Asn Leu Thr Leu Val Ser Thr
145 150 155 160

Asn Gly Ser Ser Gly Cys Gly Arg Cys His Lys Ser Cys Thr Gly Arg
165 170 175

Cys Trp Gly Pro Thr Glu Asn His Cys Gln Thr Leu Thr Arg Thr Val
180 185 190

Cys Ala Glu Gln Cys Asp Gly Arg Cys Tyr Gly Pro Tyr Val Ser Asp
195 200 205

Cys Cys His Arg Glu Cys Ala Gly Gly Cys Ser Gly Pro Lys Asp Thr
210 215 220

Asp Cys Phe Ala Cys Met Asn Phe Asn Asp Ser Gly Ala Cys Val Thr
225 230 235 240

Gln Cys Pro Gln Thr Phe Val Tyr Asn Pro Thr Thr Phe Gln Leu Glu
245 250 255

His Asn Phe Asn Ala Lys Tyr Thr Tyr Gly Ala Phe Cys Val Lys Lys
260 265 270

Cys Pro His Asn Phe Val Val Asp Ser Ser Ser Cys Val Arg Ala Cys
275 280 285

Pro Ser Ser Lys Met Glu Val Glu Glu Asn Gly Ile Lys Met Cys Lys
290 295 300

Pro Cys Thr Asp Ile Cys Pro Lys Ala Cys Asp Gly Ile Gly Thr Gly
305 310 315 320

Ser Leu Met Ser Ala Gln Thr Val Asp Ser Ser Asn Ile Asp Lys Phe
325 330 335

Ile Asn Cys Thr Lys Ile Asn Gly Asn Leu Ile Phe Leu Val Thr Gly
340 345 350

Ile His Gly Asp Pro Tyr Asn Ala Ile Glu Ala Ile Asp Pro Glu Lys
355 360 365

Leu Asn Val Phe Arg Thr Val Arg Glu Ile Thr Gly Phe Leu Asn Ile
370 375 380

Gln Ser Trp Pro Pro Asn Met Thr Asp Phe Ser Val Phe Ser Asn Leu
385 390 395 400

Val Thr Ile Gly Gly Arg Val Leu Tyr Ser Gly Leu Ser Leu Leu Ile
405 410 415

Leu Lys Gln Gln Gly Ile Thr Ser Leu Gln Phe Gln Ser Leu Lys Glu
420 425 430

Ile Ser Ala Gly Asn Ile Tyr Ile Thr Asp Asn Ser Asn Leu Cys Tyr
435 440 445

Tyr His Thr Ile Asn Trp Thr Thr Leu Phe Ser Thr Ile Asn Gln Arg
450 455 460

Ile Val Ile Arg Asp Asn Arg Lys Ala Glu Asn Cys Thr Ala Glu Gly
465 470 475 480

Met Val Cys Asn His Leu Cys Ser Ser Asp Gly Cys Trp Gly Pro Gly
485 490 495

Pro Asp Gln Cys Leu Ser
500